Harada, Masaaki; **Kharaghani, Hadi**

Orthogonal designs, self-dual codes, and the Leech lattice. (English) Zbl 1088.94027

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The authors give a construction of an orthogonal matrix of order $12n$. They use this array to construct orthogonal designs which in turn produce self-dual codes over finite fields of odd order. Following a suggestion of Ozeki, they use these self-dual codes to construct, via construction A, the odd Leech lattice. Self-dual codes that produce this lattice are given for a variety of primes less than 100.

Reviewer: Steven T. Dougherty (Scranton)

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05B20 Combinatorial aspects of matrices (incidence, Hadamard, etc.)

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